Claims

1. Process for preparing a stable oil containing long-chain polyunsaturated fatty acids (LC-PUFAs) in the form of triacylglycerols, in particular arachidonic acid (ARA), dihomogammalinolenic acid (DHGLA), docosahexaenoic acid (DHA) or eicosapentaenoic acid (EPA), characterized in that one or more biomasses obtained from the culture of a microorganism, especially of a fungus or of a microalga containing the acids ARA, DHGLA, DHA or EPA, are pressed in the dry state so as to obtain a first press oil and a cake, and in that the oil thus obtained is treated with an adsorbent and in that it is subjected to deodorization under controlled conditions.

2. Process according to Claim 1, in which the biomass contains at least one long-chain polyunsaturated fatty acid chosen from ARA and DHA.

3. Process according to Claim 2, in which a biomass containing ARA is treated.

4. Process according to Claim 2, in which a biomass containing DHA is treated.

5. Process according to Claim 2, in which a mixture of biomasses, containing ARA and DHA, is treated.

6. Process according to one of Claims 1 to 5, in which a carrier oil, entering into the composition of a food, nutritional, pharmaceutical or cosmetic product, is brought into contact with the press cake of the biomass so as to transfer the long-chain polyunsaturated fatty acid(s) in the form of triacylglycerols to the said carrier, the oil containing the said fatty acid(s) is separated from the biomass cake by pressing and filtration, which constitutes the second press oil, and the pressed oils

are combined and they are refined under controlled conditions.

7. Process according to Claim 6, in which the pressed oils are subjected to physical refining using a processing agent, it being possible for the treatment to be carried out during contact with the carrier oil or after production of the pressed oil, in particular during filtration.

8. Process according to Claim 1, in which the walls of the cells of the microorganisms are broken by pressing, in order to increase the level of incorporation of the biomass oil into the carrier oil.

9. Process according to Claim 6, in which the press cake of the biomass is subjected to grinding in the presence of the carrier oil under gentle conditions, at a moderate temperature under an inert atmosphere, in particular under a nitrogen layer.

10. Process according to one of Claims 6 to 9, in which a final filtration is carried out in order to remove the fine particles of biomass residue.

11. Foodstuff containing an oil obtained by the process according to one of Claims 1 to 10.

12. Infant foodstuff containing an oil obtained by the process according to one of Claims 1 to 10.

13. Infant foodstuff containing an oil obtained by the process according to one of Claims 1 to 10, in combination with a fish oil.

14. Nutritional composition containing an oil obtained by the process according to one of Claims 1 to 10.

15. Cosmetic composition in dry or emulsion form

containing an oil obtained by the process according to one of Claims 1 to 10.

16. Foodstuff containing an oil obtained according to one of Claims 1 to 10 intended as animal feed.

17. Foodstuff containing the biomass residue obtained by the process according to one of Claims 1 to 10, intended as animal feed.